Dixie 1965

FOREST INSECT CONDITIONS, DIXIE NATIONAL FOREST 1965

The following is an account of the primary insect problems encountered on the Dixie National Forest this year. Information was compiled from aerial survey data and biological evaluations.

The major forest insect problems were Engelmann spruce beetle, Douglas-fir beetle, white fir needle miner, pitch nodule moth, aspen leaf tier--large aspen tortrix, and the spruce mealybug.

Briefly, insect conditions on the Forest are as follows: Engelmann spruce beetle populations are at a relatively low level except on the Mitchell sale in Center Creek. Older infestations of Douglas-fir beetle for the most part are continuing to decline, but there are some "hot spots" that may be increasing. The white fir needle miner is active in Bryce Canyon National Park and on the East Fork of the Sevier River and the outbreak is expected to be light next year throughout the Forest. Aspen leaf tier populations are at a low level. The large aspen tortrix is causing moderate to heavy defoliation on about 3,000 acres in Poison Hollow, Aquarius Plateau.

Engelmann spruce beetle, Dendroctonus obesus Mann.

Engelmann spruce beetle populations are at a relatively low level this year except for the Mitchell Sale area in Center Creek.

In the Clayton, Birch Creek and Griffin Springs sale areas approximately 12,000 stumps were chemically treated in 1964 and slash, which contained heavy spruce beetle populations, was burned. This year the beetle populations in these areas are endemic.

Burning of infested stumps and slash early this year within the Clay Creek sale reduced spruce beetle broods in that area to a low level. The remaining beetles are no serious threat to standing green trees.

A rather large population of the beetle has built up in the Mitchell spruce sale in Center Creek. Heavy broods were found in slash and stumps that resulted from cutting early this year and before. A few hibernating adults were found which will emerge and infest current slash next spring. The majority of the broods, however, were eggs, larvae, and pupae which will mature next year and overwinter as hibernating adults. These beetles may emerge and infest standing green spruce in the summer of 1967 if the slash is left unless other controlling factors, such as weather or parasites and predators are exerted. If the older slash containing the broods is burned before beetle flight in the summer of 1967, the threat of an outbreak will be considerably reduced, if not eliminated.

Douglas-fir beetle, Dendroctonus pseudotsugae Hopk.

The majority of the older Douglas-fir beetle infestations on the Forest continued to decrease during 1965. However, aerial surveys reported several areas where infestations still persist.

Because of manpower and time limitations, no ground evaluations of any of the Forest Douglas-fir beetle infestation were made this year; therefore, no confirmation of observations made during aerial surveys was possible.

The following list, compiled from aerial survey data, shows the major current areas of infestation and the number of trees involved:

AREA	NUMBER OF CURRENT FADERS
Pass Canyon	50 - 60
S. Fk. Prospect Creek	45
Lightning Creek	25
N. Fk. Deer Creek	45
S. Fk. Deep Creek	30
N. Fk. Deep Creek	200 - 300
Rocky Ford Creek	800 - 1000
Mud Springs Creek	200 - 300
Lost Creek-- Chokecherry	300 - 400
Right Fk. Sanford Creek	100 - 200
So. East of Tropic Res.	800 - 1000
Clay Creek	30
Griffin Creek	50 - 70
Anger Lake	30 - 40
McGath Lake	100
Pollywog Lake	50
Pacer Lake	300
Spring Wide Hollow	50 -75
Hoosier Creek	400
Sugar Loaf Mt.	30
Blowhard Mt.	40 - 50
Dairy Canyon	30

No predictions of trend can be made because of the lack of ground evaluations; however, it seems likely that the decline will continue in most areas in 1966. In areas where the number of current "faders" equals or exceed the old and there is sufficient host material nearby; attacks will probably increase or at least continue at the present level. Every possible effort will be made to make thorough evaluations of the most serious infestations next year.

White fir needle miner, Epinotia meritana Hein.

White fir needle miner populations have increased in white fir stands in Bryce Canyon National Park and on adjoining portions of the Forest for the past three years. Predicted increases in damage to white fir in these areas by the needle miner did not materialize. The occurrence of early storms during this year's moth flight is thought to be the primary factor contributing to the unexpected decline. Defoliation was less than 25 percent in all areas examined. Damage is expected to be about the same or slightly less in 1966.

Spruce in fed of Cat.

1963 1964 1965

Pitch nodule moth, Petrova albicapitana spp. Arizonensis (Hein.)

Pitch nodule moth populations were epidemic on several thousand acres of pinyon pine this year. Tip killing was serious on Bureau of Land Management and Forest lands southwest of Panguitch, Utah. Trees have been stunted; branch tips have curled, turned yellow, and many have been broken off by the wind. Old nodules persist on branches for about three years. In Christmas tree sale areas, most of the trees have been rendered unfit for sale.

Evaluations this fall showed populations were significantly reduced by natural factors. Size of area infested will likely remain unchanged and tip killing is expected to be light in 1966.

Aspen leaf tier, Sciaphila duplex (Wlsh.) and the large aspen tortrix, Choristoneura conflictana (Wlk.)

Infestations of aspen leaf tier continued to decrease on the Forest this year. In areas where defoliation has been heavy in the past, no defoliation, or leaf tier populations were observed. Collapse of the outbreak was attributed to increasing populations of hymenopterous (wasps) and dipterous (flies) parasites since 1962. Other undeterminable natural factors probably added to the population decline.

Aerial observers reported defoliator activity in the following locations:

AREA	DEFOLIATION CLASS	ACRES DEFOLIATED
West Deer Bowns Lake	Light to Heavy	2500
Pollywog Lake	Light to Heavy	300
Panguitch Creek	Medium to Heavy	20 - 30
Panguitch Lake	Medium to Heavy	30 - 40

Aspen defoliation has not been reported in these areas prior to 1965. No ground examination was made, so the biological factor responsible for defoliation is undetermined.

An additional 3,000 acres of aspen received moderate to heavy defoliation by the large aspen tortrix in Poison Hollow on the Aquarius Plateau. At the time the evaluation was made, moths were in flight and depositing eggs on the boles of trees. The infestation is expected to continue at about its present level through next year.

Areas previously defoliated by the leaf tier are expected to remain at a low level through next year.